

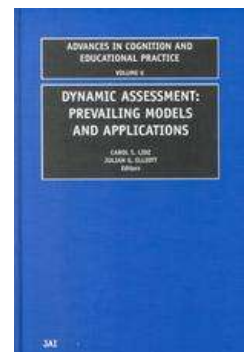
A Joint Review of Three Books on Dynamic Assessment

1. Lidz, C, and Elliott, J, (Eds.) (2000). *Dynamic Assessment: Prevailing Models and Applications*. (Advances in Cognition and Educational Practice, Vol. 6). Elsevier Science Inc. ISBN: 0-7623-0424-3
2. Sternberg, R. and Grigorenko, E. (2002). *Dynamic Testing: The Nature and Measurement of Learning Potential*. Cambridge University Press. ISBN: 0 521 7128(hardback). ISBN 0-521-77814-x (paperback)
3. Tzuriel, D. (2001). *Dynamic Assessment of Young Children*. Kluwer Academic/Plenum Publishers. ISBN: 0-306-46510-8

Three recent contributions to the growing literature on Dynamic Assessment demonstrate the current breadth and diversity of research and assessment models whose authors define them as dynamic or interactive.

Dynamic Assessment: Prevailing Models and Applications. Lidz, C, and Elliott, J, (Eds.) (2000)

In Volume 6 in the series *Advances in Cognition and Educational Practice*, Lidz and Elliott, (2000) have assembled different approaches and methods in Dynamic Assessment (DA), which serves to update some earlier edited texts on DA models. Among these are Lidz's still highly relevant *Dynamic Assessment* (1987), Hamers, Sitjma, and Ruijsenaars's compendium of European approaches (1993), and Haywood and Tzuriel's *Interactive Assessment* (1992). The editors of this present volume have not sought to elaborate a specific model or theoretical orientation, but have taken as their goal to bring together a wide range of contributions from different perspectives to give a balanced overview of the field. Their stated aim is to provide psychologists with sufficient information to stimulate both practice and research.



The book is divided into four sections. An introduction written by the editors is followed by two sections, DA Procedures and Special Applications of DA Procedures, which form the majority of the contents of the book. A shorter final section raises specific issues regarding DA procedures. Each chapter follows a clear structure, moving from theoretical issues to practical testing procedures and at least one case study illustrating the method described. This consistency makes this large volume user-friendly and facilitates comparison between different approaches and models.

The contributions illustrate the two major underpinning influences of DA: the constructivist theories of Vygotsky on which a number of the models are based, and others that are derivatives of the work of Feuerstein, whose Learning Propensity Assessment Device (LPAD) is described in detail elsewhere (Lidz, 1987; Haywood & Tzuriel 1992). The editors have carefully sought to portray DA as widely as possible, including procedures that some would regard as at the outer edges of dynamic. The Swanson Cognitive Processing test, which uses a topical and challenging modality, that of computer based tests, is at one end of a continuum of types of interventions, from structured to unstructured, being closer to standardized testing, while the other end is represented by the younger-years tests of Tzuriel, which are among the most clinical models of DA, where intervention is non-standardized.

Although DA has been thought of as dominated by American research (this journal has done much to dispel that national bias), the Lidz and Elliott book clearly demonstrates that this is not the case. There are several important contributions by European researchers actively engaged in development and application of DA. Hessels's Learning Potential test addresses one of the earliest concerns of DA, the development of culturally fair tests, examining potential rather than manifest performance in ethnic minority groups. Jurgens and Beckman set out their test of classification and concepts for younger learners as do Schlatter and Büchel, in relation to students with moderate learning disabilities. Resing, also working with younger learners, has developed a test of inductive reasoning and demonstrates its application.

These tests have in common the dynamic examination of elements of logical reasoning such as analogical, syllogistic, or other forms of inferential reasoning, which are not directly related to specific numeracy and literacy tasks. Most use nonverbal materials and offer structured or semi-structured prompts (often verbal) within the dynamic section of the test administration. Their findings do not translate readily into school achievement targets as demanded by local or national education bodies. This may be one reason why the use of DA is not more widespread, because psychologists do not find it easy to bridge the findings of DA into content curricula.

One of the stated aims of DA is to inform intervention. This issue is addressed by Lidz (school readiness), Greenberg (elementary school classrooms), Chan, Ashman, and van Krayenoord (science and biology), Jensen (the Mindladder model), and Kaniel (DA linked to teaching for transfer and metacognition). An area of DA needing further research in our increasingly value-added educational systems is to develop more demonstrable links to curriculum at different levels and domains. The case for DA having greater treatment validity than static test procedures has yet to be convincingly made.

A somewhat different perspective is that of Karpov, whose description of a reasoning test is anchored in Vygotskian theory, which informs both the structure and interpretation of the test, and which addresses cross-domain generalization of cognitive skills at the primary school level. Three chapters describe the use of more extensive test batteries to examine a range of cognitive functions associated with particular developmental stages. These are Kahn's DA procedures for infants and toddlers, Tzuriel's Cognitive Modifiability Battery (CMB), aimed at pre-school (Kindergarten) or developmentally "young" students, and Lidz's Applications of Cognitive Functions Scale (ACFS), a set of subtests appropriate to the stage of school readiness. All three approaches imply (as the editors indeed point out in their introduction) familiarity with Feuerstein's theories, in particular his taxonomy of Deficient Cognitive Functions and his theory of Mediated Learning Experience.

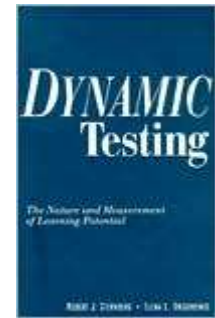
The third section of the book presents a few special applications, including DA with students with severe learning disabilities (Jepsen), DA with adults (Samuels), and DA for language impaired students. Peña and Gillam have "dynamized" a language test using explanatory discourse analysis to intervene in ways that permit differentiation between language difference and language difficulty. A common practice among speech and language therapists using DA is to intervene on standardized tests such as the CELF-R, giving insights similar to those described by Peña and Gillam. Problems can arise, however, with the dynamic use of standardized tests, because the test can then no longer be used with that student in a standardized administration. That would not matter at all according to Sternberg (Lidz & Elliott, 2000, p.xiii), who states that "Dynamic Testing can provide all the information provided by static testing and then some more." Whilst recognizing the need for selection in a book of this length, it would have been interesting to see some other applications of DA with special groups, such as adults with acquired brain-trauma (Haywood & Miller, 2002) and work with the elderly, including Alzheimer's patients (Fernandez-Ballesteros, 2001).

In the final section of the book, Kaniel examines the relationship between DA and metacognitive teaching; Carlson and Wiedl revisit the issue of validity of DA procedures using their testing-the-limits paradigm, and, finally, Elliott examines some DA issues with reference to DA use within an inner-city education authority in the UK, facing the challenges of social and economic deprivation and inclusion of ethnic minorities in the educational system.

This book is not a ground-breaker, in that there is not a lot that has not been documented elsewhere; however, it succeeds as a very useful update of the field of DA. There is sufficient detail in each chapter to enable interested practitioners to investigate further, and the book achieves a good balance between theoretical and research issues and practical application. Sternberg wrote the foreword to Lidz and Elliott's book, expressing his view of the importance of DA and questioning why methods as appealing and theoretically attractive as DA seem nevertheless to be so under-utilized. His foreword could equally serve as an introduction to his and Grigorenko's own book on the subject.

Dynamic Testing; Sternberg, R. and Grigorenko, E. (2002)

Dynamic Testing occupies the middle ground among the three books reviewed here. Whereas Lidz and Elliott's book is the most general treatment of the subject, Dynamic Testing incorporates both a general survey of the field and the authors' own DA model, illustrated with two case studies. The authors provide a well-written summary of the nature, history, and diversity of DA models, with an interesting section on post Vygotskian work in Russia. They raise some critical issues, particularly decrying the scarcity of serious validation attempts in Dynamic Assessment. The chapters on history and critiques of DA provide the background for the authors to set out their own DA model, designed to assess the kinds of components outlined in Sternberg's theory of Successful Intelligence as Developing Expertise.



The book is a greatly elaborated presentation of ideas set out by the authors in an article of the same name (1998). Grigorenko's expertise in statistical analysis comes to the fore in their joint work to develop DA tests in line with Sternberg's theory of intelligence. The authors argue that conventional IQ based skills account for about 25% (correlation approx. .50) of the variation in various measures of school success.

They further argue that conventional IQ based skills account for only about 10% of the variation (correlation about .30) in various measures of life success. The authors outline components of Successful Intelligence (SI), a relatively recent extension of Sternberg's Triarchic Theory of Intelligence. They consistently emphasize the need for certain instructional components to be combined with assessment. They argue that instruction should involve teaching for analytical, creative, and practical thinking, as well as memory learning, and that, therefore, assessment should similarly involve all these components. Successful Intelligence, according to the authors, is about developing expertise. It follows, therefore, that the way in which future development must be assessed is to look for what is in the process of development, that is, the measurement of learning potential. And so we come full circle to the basic premises of Dynamic Assessment in its view of intelligence as dynamic, modifiable, and flexible.

The SI list of components of instruction/assessment reads like a familiar set of principles for modifying cognitive performance and developing metacognitive awareness within a Dynamic Assessment process: identify the existence of problems; define the problems; allocate resources for the problems; mentally represent the problems; formulate strategies for solving the problems; monitor the strategies while problem solving; evaluate the solutions after they are done.

One case study presented by the authors is that involving Tanzanian children. This work is part of a large project in which the authors have been using DA to identify hidden potential among children suffering chronic infections that result in poor manifest functioning. Their findings have been used to highlight the loss of school achievement with its resulting long-term social and economic losses, as a result of insufficiently treated parasitic illnesses. The second case study involves measuring foreign language learning ability, an area of DA research and application that is being increasingly investigated. This latter application of DA testing procedures provides an example of the authors' contention that we instruct, value, and use as measures of intelligence whatever happens to be important for our "culture" at any given time.

The book packs a lot of issues between its covers. It summarizes and reinforces much of what already exists in the literature on DA, but also articulates recurrent areas of criticism and inadequacies in work within the DA paradigm, which when stacked together may go some way to account for the road less travelled. Sternberg and Grigorenko conclude on an optimistic note: that DA will, they believe, go on to deliver its promise when some of the concerns they and others raise are systematically addressed.

Dynamic Assessment of Young Children, Tzuriel, D. (2001).

A second-generation student of Feuerstein, Tzuriel has assembled 20 years of his development and research in this, his first full-length book in English. This is the most methodologically specific of the three books. Tzuriel has written and researched extensively on Feuerstein's theory of Mediated Learning Experience, testing its proposed variables in different settings and with different populations. An important contribution to DA are Tzuriel's DA tests for younger children, which are based directly on Feuerstein's theories. Some of his earliest work was undertaken jointly with Prina Klein, in the Department of Education at Bar-Ilan University, where a Feuerstein group worked for many years, and which at one time included Feuerstein himself and Ya'acov Rand, who was one of the co-authors of the LPAD.



In some important respects, Tzuriel's work can be considered a downward extension of the LPAD, because he has applied LPAD principles to a younger age/developmental level than the original LPAD battery was designed to address. Whereas Tzuriel emphasizes some aspects of Feuerstein's LPAD components, he de-emphasizes others (such as Feuerstein's Cognitive Map) and introduces variations in administration that reflect his concern with issues of validity and reliability. The two main strands of Tzuriel's work, his DA tests and his attempts to test and apply MLE parameters, are frequently brought together in his research, because he uses his own DA tests as pre- and posttest measures of cognitive changes hypothesised by MLE theory.

As with Sternberg and Grigorenko's book, Tzuriel begins by setting out some of the influences of the theories of Vygotsky and Feuerstein. Tzuriel draws on both sources for his tests, but concentrates most on Feuerstein's work. The references to Piaget in the book are rather scant, considering the extent to which the components of cognitive functions he chooses to test and modify in younger children are drawn primarily from Piaget's pre-operational and concrete operational stages of learning. Given the predominant influence of Piaget's components of cognitive functioning in Feuerstein's original list of Deficient Cognitive Functions, it is no surprise that Tzuriel, working within the same theoretical model, has elicited significant Piagetian components of effective thinking and problem solving in the early years.

Tzuriel uses the theory of Mediated Learning Experience as a central construct of his tests, but he does not systematically operationalize MLE within the tests. He refers to the need to mediate important cognitive functions, strategies, and methods of problem solving. He offers some general suggestions for mediating, such as working step by step, teaching one variable at a time, and helping the child to control trial and error behavior, but he tends on the whole to leave the techniques of mediation to the clinical judgement of individual assessors. In this respect, he is very much a student of Feuerstein. Much lies in the skill of the clinician, and much depends on the quality of the rapport built between the mediator and the student. The tests are tools to be manipulated by a skilled mediator. It is exactly Feuerstein and it is exactly what many psychologists and critics of this highly clinical style of dynamic assessment are so uncomfortable with. It seems to leave a lot (too much?) to the skill of the mediator. How do you replicate the qualitative aspects of a relationship that motivates a child to pull the best out of herself in a testing situation? However, in its very area of vulnerability lies the creativity and dynamism of this approach.

Tzuriel has tried to address concerns of validity and reliability in his DA tests by developing two test versions, a clinical/educational mode of testing, in which mediation is not standardized, and a research version, which is much more akin to the graduated prompts approach of Budoff, Campione, and Brown, and others working in a Vygotskian orientation. In the latter approach more structured intervention is given in the Zone of Proximal Development and modifiability is estimated via change scores from pre-test to posttest following mediation.

By offering the assessor a choice, Tzuriel has created some flexible test materials. Not all of the original LPAD test permit this degree of manipulation of test items to estimate near transfer (one

measure of cognitive modifiability), because they do not all have parallel test forms. Furthermore, consistent with DA theory, his tests are as useful for intervention as they are for testing purposes, supporting the paradigm that DA is as much about testing in order to intervene and intervening in order to test.

Another related area of research is Tzuriel's use of DA tests to evaluate cognitive programs. Typically, achievement tests have been used to measure gains on cognitive programs, although those tests are not designed for that purpose. Tzuriel describes how DA tests can provide a more appropriate measure of hypothesized areas of change as a result of cognitive intervention programs such as Bright Start (Haywood, Brooks, and Burns, 1986). Tzuriel has also sought to differentiate between different parameters of MLE. He has tackled questions such as the following: Are some parameters of MLE more relevant to the development of certain cognitive functions than others? Do some parameters of MLE have a more direct effect on later school achievement? Are there gender differences in the use of MLE? How universal is MLE? Is it more situational and culturally specific than Feuerstein has suggested?

Tzuriel and others (some of whose work is illustrated in Lidz and Elliott's book) have tried to move MLE theory into practical applications on the assumption that if it is so important as an ingredient of successful cognitive development, it needs to be prioritized and systematically taught to those in significant mediating roles. One slight marring aspect of an otherwise carefully constructed book is the quality of the English. One hears Tzuriel's style of presentation throughout, but it could have benefited from some more careful editing; however, the style of the book is straightforward and accessible to those not specifically trained in this method of working. The book is a timely and welcome summary of Tzuriel's extensive involvement in DA. Tzuriel has opened up a lot of lines of investigation, and the many unanswered questions invite future research, in DA test development as well as in applications of DA to school achievement, and in the prevention of failure for at-risk children.

The three books reviewed here have areas of overlap in that they all have substantial sections setting out the context of present day work in DA. Most authors contributing to the literature on DA still feel the need to trace its history and the development of its theories and methods. Perhaps the third generation of practitioners and researchers will leave the history of DA as having now been well documented and concentrate increasingly on exploring its problems and challenges, so that DA can deliver the promise that all these authors believe still lies ahead.

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